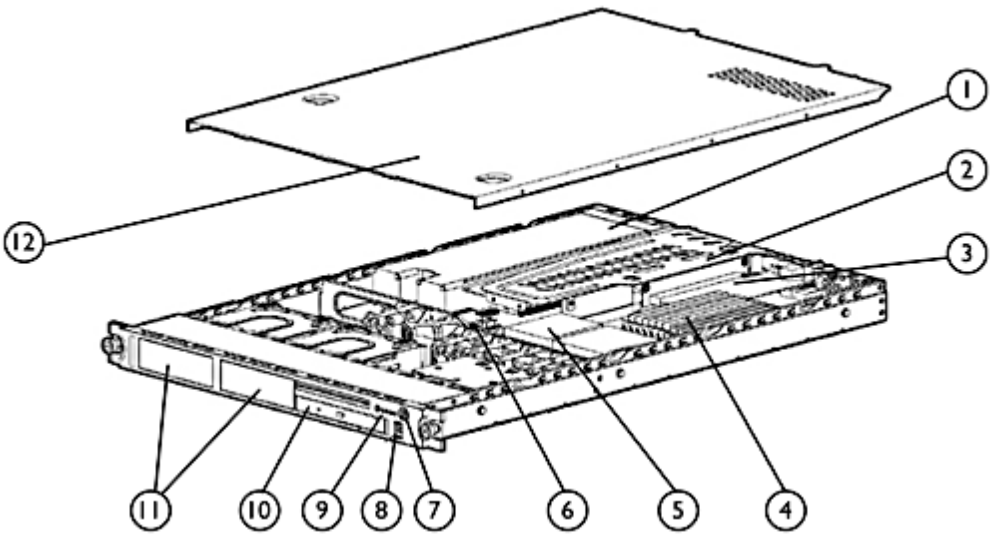
Overview



1. 500W power supply
2. Full-height, full length 133 MHz PCI-X expansion slot which supports PCI-Express with optional riser board
3. Low-profile, half-length 133 MHz PCI-X expansion slot
4. Memory DIMM slots
5. Intel Xeon Processors (Supports up to 2)
6. System fans
7. Power on/off
8. USB port
9. System LEDs
10. Optional CD- or DVD-ROM drive
11. Two Non-Hot Plug SATA OR SCSI 1" Hard Drive Bays
12. Access panel

At A Glance

- Processors:
  - Supports 1 or 2 Intel Xeon processors:
    - 2.8 GHz 2MB Level 2 Cache 800MHz front-side bus supporting Hyper-Threading Technology
    - 3.4 GHz 2MB Level 2 Cache 800MHz front-side bus supporting Hyper-Threading Technology
    - 3.6 GHz 2MB Level 2 Cache 800MHz front-side bus supporting Hyper-Threading Technology
    - Intel Chipset is E7520
- Memory:
  - 8 DIMM slots, supporting up 16GB DDR2-400MHz memory
  - 1 GB of PC2-3200 DDR2 SDRAM running at 400MHz with Advanced ECC capabilities standard, expandable to 16 GB
- Storage Controller:
  - Serial ATA (SATA) models offer SATA controller in the chipset
  - SCSI models will have SCSI controller in a slot (occupies low-profile slot)
- Internal Drive Support:
  - Support for up to two SATA/SCSI non-hot plug hard drives
  - Internal storage capacity of up to 1TB (2 x 500GB non-hot plug SATA HDDs), or 292GB (2x146GB NHP SCSI HDDs)
- Network Controller:
  - Two integrated Dual Broadcom 10/100/1000 5721 NICs (Wake on LAN and PXE capable)
  - Integrated 10/100 NIC dedicated for server management
- Expansion Slots:
  - Two PCI-X 64-bit/133MHz PCI slots operating at 3.3 volts (one full-length, one low-profile)
  - Includes one full-length, full-height and one low-profile, half-length 64-bit/133MHz PCI-X slot; Optional PCI Express x8

Overview

on full-length, full-height slot

- USB Ports:
  - Four USB ports (two rear, two front)
- Optical Drives:
  - Optional DVD or CD-ROM drive
- Power Supply:
  - 500W Power Supply (Non-Hot Plug, autoswitching)
- Form Factor:
  - Rack Mount (1U)
- Management:
  - ROM Setup Utility
  - HP ProLiant Lights Out 100i Remote Management support standard
  - IPMI 2.0 support
- Warranty:
  - Protected by HP Services, including a one-year, limited warranty, Parts only 1 year limited Global warranty - Certain restrictions and exclusions apply.

Standard Features

NOTE: For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

Processor One of the following depending on Model	Intel Xeon 2.8 GHz/800Mhz - 2MB L2 Intel Xeon 3.4 GHz/800MHz - 2MB L2 Intel Xeon 3.6 GHz/800MHz - 2MB L2
Cache Memory (Depending on Model)	2MB Level 2 cache memory
Upgradeability	Upgradeable to dual processing
Chipset	Intel Chipset E7520 with 800MHz Front Side Bus
Memory Protection	Advanced ECC capabilities

Memory			
	Type	PC2-3200 DDR2 SDRAM running at 400MHz	
	Standard	1 GB (2 x 512 MB)	(2 x 512 MB)
	Maximum	16 GB (8 x 2 GB)	(8 x 2 GB)

Network Controller	Integrated Dual Broadcom 5721 10/100/1000 NICs (Wake on LAN and PXE capable)

Expansion Slots

Slot Number	Bus Speed	Bus Number*	Device Number**	Hot Plug (Y/N)	PCI Voltage	Notes
1	64-bit/133MHz PCI-X	1	0	N	3.3 volts	Full length, full height
1	X8 PCI Express	5	1	N	3.3 volts	Full length, full height
2	64-bit/133MHz PCI-X	6	3	N	3.3 volts	Low-profile

NOTE: For more information regarding PCI-X, please see the following URL: http://www.HP.com/pci-x.

NOTE: All slots can accept universal keyed PCI cards

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.

** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

Storage Controller	Serial ATA (SATA) models offer SATA controller in the chipset; SCSI models will have SCSI controller in a slot (occupies low-profile slot)

Standard Features

Storage	Diskette Drives	via USB only	
	DVD-ROM	8x IDE (ATAPI) DVD-ROM drive, slim (optional)	
	CD-ROM	24x IDE (ATAPI) CD-ROM drive (optional)	
	Hard Drives	Non-Hot Plug SATA	80GB 7,200 rpm Hard Drive
		Non-Hot Plug SCSI	36GB 15,000 rpm Hard Drive
Maximum Internal Storage	Non-Hot Plug SATA	1TB	2 x 500GB
	Non-Hot Plug SCSI	292GB	2 x 146GB
Interfaces	Parallel	None	
	Network RJ-45 (Ethernet)	1-Dedicated for HP ProLiant Lights Out 100i Remote Management	
	Serial	1	
	Pointing Device (Mouse)	1	
	Graphics	1	
	Keyboard	1	
	USB	4 (two front, two rear) NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html.	
	Network RJ-45 (Ethernet)	2	
Graphics	Integrated ATI RAGE XL Video Controller with 8MB SDRAM Video Memory		
Form Factor	Rack Mount (1U)		
ProLiant Essentials Foundation Pack Software	Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: • Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus. • Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms, and other blended threats. NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information. NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials.	

Standard Features

Industry Standard Compliance	ACPI V2.0 Compliant PCI 2.2 Compliant PXE Support WOL Support Microsoft® Logo certifications IPMI 2.0 Compliant
Manageability	HP ProLiant Lights Out 100i Remote Management standard
Security	Power-on password Setup password
Server Power Cords	One Highline IEC Power cord ships standard (for connection to a Power Distribution Unit) NOTE: Rack models ship standard with an IEC cable. Localized cables included with geographic specific models in other world regions.
UPS and PDU Power Cord Matrix	Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units: ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf.
Power Supply	500 Watts, auto-switching, PFC (Power Factor Correcting)
System Fans	6 - Non-hot plug, Non-redundant system fan shipped standard
OS Support	Microsoft Windows® 2000 Server (32-bit) Microsoft Windows 2000 Advanced Server (32-bit) Microsoft Windows 2003 Standard Edition (32-bit) Microsoft Windows 2003 Enterprise Edition (32-bit) Microsoft Windows 2003 Web Edition (32-bit) Microsoft Windows 2003 for Extended Systems Standard Edition (64-bit) Microsoft Windows 2003 for Extended Systems Enterprise Edition (64-bit) Red Hat Linux AS/ES/WS 3.0 and 4.0 (32- and 64-bit) SUSE Linux 8 (32-bit) SUSE Linux 9 (32- and 64-bit) Solaris 10 32/64-bit NOTE: For an up-to-date listing of the latest OS support matrix, please see: http://www.hp.com/go/supportos NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant DL140 G2, please see: http://h18023.www1.hp.com/support/files/server/us/index.html NOTE: For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: http://h18004.www1.hp.com/products/servers/software/OEM.html NOTE: Drivers may also found on the base media for some Linux OS's. When configuring your server, please consult your base media driver base, or visit HP.com at: http://h18023.www1.hp.com/support/files/server/us/index.html

Rack Airflow Requirements

Rack 10000 series Cabinets
The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches)
CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: http://h18000.www1.hp.com/products/servers/proliantdl140/index.html

Telco Rack Support

Telco Rack Kit:
Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions.
http://www.racksolutions.com/hp

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to http://www.hp.com/go/factory-express.

Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.

NOTE: Server Warranty includes 1 year Parts, 1 year Labour, 1-year on-site support. Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

HP Care Pack services include coverage for the HP branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3kVA; these items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

HP services provide continuous care and support expertise with committed response designed to meet your IT and business needs.

To fully capitalizing on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions provides a range of support services designed to meet the varying needs of business. Whether an SMB or large global corporation HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Enhanced Care - Minimum recommended service support offer designed to ensure customers have access to expert assistance, whenever they need it.

- *Next Business Day on site coverage, 3 Years*

Continuance Care - Recommended service, delivering cost-effective support options designed to extend HP Services committed response and guaranteed fix times, designed to speed problem identification and resolution.

- *4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years*

Total Care - Highest HP Support service level recommend to help increase IT performance and availability with comprehensive, integrated hardware and software services

- *4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years*

Deployment Services - HP Installation and Start Up services designed to take time, risk, and worry out of the deployment of ProLiant servers - and free customers IT support staff to focus on what they do best, their business.

- *Installation of a ProLiant server as per Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays*

For a complete listing of service offerings and information visit:
http://www.hp.com/services/proliantservices
http://www.hp.com/go/proliant/carepack

HPC Interconnects

NOTE: High Performance Computing (HPC) interconnect technologies are available for the DL140 under the Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand, Gigabit Ethernet or Myrinet Interconnects: http://www.hp.com/techservers/clusters/ucp/index.html

HPC Interconnect	InfiniBand	PCI-X and PCI-Express adapters
	Gigabit Ethernet	Use embedded ports
	Myrinet XP	PCI-X Rev D and Rev E adapters

Models

ProLiant DL140 G2 2.8 GHz Xeon 1GB, 80GB, (1P) NHP SATA 405637-001	Processor	One (1) Intel Xeon 2.8 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	Embedded SATA Controller
	Hard Drive	80GB NHP SATA HDD
	Internal Storage	1TB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)
ProLiant DL140 G2 2.8GHz Xeon 1GB, 36GB, (1P) NHP SCSI 405638-001	Processor	One (1) Intel Xeon 2.8 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	U320 Single Channel PCI-X controller (in low profile slot)
	Hard Drive	36GB NHP SCSI HDD
	Internal Storage	292GB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)
ProLiant DL140 G2 3.4 GHz Xeon 1GB, 80GB, (1P) NHP SATA 405639-001	Processor	One (1) Intel Xeon 3.4 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	Embedded SATA Controller
	Hard Drive	80GB NHP SATA HDD
	Internal Storage	1TBGB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)

Models

ProLiant DL140 G2 3.4 GHz Xeon 1GB, 36GB, (1P) NHP SCSI 405640-001	Processor	One (1) Intel Xeon 3.4 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	U320 Single Channel PCI-X controller (in low profile slot)
	Hard Drive	36GB NHP SCSI HDD
	Internal Storage	292GB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)
ProLiant DL140 G2 3.6 GHz Xeon 1GB, 80GB, (1P) NHP SATA 383504-001	Processor	One (1) Intel Xeon 3.6 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	Embedded SATA Controller
	Hard Drive	80GB NHP SATA HDD
	Internal Storage	1TB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)
ProLiant DL140 G2 3.6 GHz Xeon 1GB, 36GB, (1P) NHP SCSI 383503-001	Processor	One (1) Intel Xeon 3.6 GHz processor, 800MHz front-side-bus (Supports up to 2)
	Cache Memory	2MB second level ECC cache
	Memory	1 GB PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities
	Network Controller	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)
	Storage Controller	U320 Single Channel PCI-X controller (in low profile slot)
	Hard Drive	36GB NHP SCSI HDD
	Internal Storage	292GB maximum (with optional hard drive)
	Form Factor	Rack Mount (1U)

NOTE: HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.
NOTE: This product offering does not support HP Factory Express Server Configuration Level 1.
NOTE: FIO indicates that this option is a Factory Installable Option.

Step 1: Base Configuration

SATA Model	HP ProLiant DL140 G2 SATA Rack Chassis	389452-405
	Factory Integrated Model ships with:	
	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)	
	Embedded SATA Controller	
	Two available 64-bit/133MHz PCI-X slots, including one full-length/full height and one low-profile/half height slot	
	500 Watt power supply	
	One Highline IEC Power cord	
	6 non-hot plug fans	
	Rack (1U)	
SCSI Model	HP ProLiant DL140 G2 SCSI Rack Chassis	376343-405
	Factory Integrated Model ships with:	
	Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)	
	One available 64-bit/133MHz PCI-X slot, (full-length/full height) The low-profile/half height slot houses the SCSI controller.	
	500 Watt power supply	
	One Highline IEC Power cord	
	6 non-hot plug fans	
	Rack (1U)	
	NOTE: The selection of SCSI Model (P/N 376343-405), requires the selection of (1) SCSI Controller. Please see Step 2 of this section for compatible SCSI Controllers.	

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

Base Processors	Intel X2.8 GHz/800-2MB FIO BASE NOTE: If 2 processors are desired, select one 405635-L21 and one 405635-B21.	405635-L21
	Intel X3.4 GHz/800-2MB FIO BASE NOTE: If 2 processors are desired, select one 405636-L21 and one 405636-B21.	405636-L21
	Intel X3.6 GHz/800-2MB FIO BASE NOTE: If 2 processors are desired, select one 378283-L21and one 378283-B21.	378283-L21
Base Memory	1 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21
	2 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 1024 MB)	343056-B21
	4 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2 x 2048 MB)	343057-B21

Configuration Information - Factory Integrated Models

Hard Drive	SATA - Non-Hot Plug	
	HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD	383410-B21
	HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD	411275-B21
	HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD	411276-B21
	HP 500GB 1.5G SATA 7.2K NHP 3.5" HDD, FIO*	404469-B21
	NOTE: *Factory Integrated Only	
	U320 SCSI- Non-Hot Plug	
	HP 36GB U320 15K NHP HDD	357012-B21
	HP 72GB U320 10K NHP HDD	332751-B21
	HP 146GB U320 10K NHP HDD	356990-B21
Controllers	HP Low Profile U320 DL140 G2/DL145 G2 Controller, FIO	390402-B21
	HP 8 Internal Port SAS HBA with RAID	347786-B21
	NOTE: For use with SATA drives only	
	HP SATA/SAS 1U Cable Kit	398307-B21
	NOTE: For use with SATA drives only	
	HP Single Channel U320 SCSI Controller	374654-B21
	HP PL100 SCSI RAID Controller	355671-B21
	NOTE: Must choose one of the above listed Controllers when selecting the SCSI Model (P/N 376343-405) in Step 1 of this section	

Step 3: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Options" section below. Some options may not be available for factory integration. Please contact an HP sales representative for additional information.

Options

ProLiant Essentials Licensing and Packaging	**ProLiant Essentials Intelligent Networking Pack Windows Edition and Linux Edition**	
	ProLiant Essentials Intelligent Networking Pack Windows Edition, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	372906-B21
	ProLiant Essentials Intelligent Networking Pack Linux Edition, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	397004-B21
	NOTE: For additional ProLiant Intelligent Networking Pack Windows Edition License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12062_ca/12062_ca.HTML	
	NOTE: For additional ProLiant Intelligent Networking Pack Linux Edition License Kits please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12327_ca/12327_ca.HTML	
	ProLiant Essentials Vulnerability and Patch Management Pack	
	ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	371645-B21
	NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12111_ca/12111_ca.HTML	
	NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information. NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials.	
Processor	Intel Xeon 2.8 GHz/2MB Processor Option Kit	405635-B21
	Intel Xeon 3.4 GHz/2MB Processor Option Kit	405636-B21
	Intel Xeon 3.6 GHz/2MB Processor Option Kit	378283-B21
Memory (DIMMs)	1 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2x512 MB)	343055-B21
	2 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2x1024 MB)	343056-B21
	4 GB of Advanced PC2 PC3200 DDR2 SDRAM DIMM Memory Kit (2x2048 MB)	343057-B21

Options

Hard Drives	**SATA - Non-Hot Plug**	
	HP 80GB 1.5G SATA 7.2K NHP 3.5" HDD	383410-B21
	HP 160GB 1.5G SATA 7.2K NHP 3.5" HDD	411275-B21
	HP 250GB 1.5G SATA 7.2K NHP 3.5" HDD	411276-B21
	NOTE: When purchasing systems with the 500GB NHP SATA drives, please reference the Configuration Information section of this QuickSpecs to order via Configuration to Order.	
	U320 SCSI- Non-Hot Plug	
	HP 36GB U320 15K NHP HDD	357012-B21
	HP 72GB U320 10K NHP HDD	332751-B21
	HP 146GB U320 10K NHP HDD	356990-B21
Optical Drives	DVD-ROM Drive	361040-B21
	24x CD-ROM Drive	349046-B21
	Multibay II DVD/CD-RW Combo Drive NOTE: When purchasing the Multibay II DVD/CD-RW Combo Drive, (P/N PA850A), the USB 2.0 Multibay II Cradle (P/N PA509A) is required.	PA850A
	USB 2.0 MultiBay II Cradle, External NOTE: When purchasing the Multibay II DVD/CD-RW Combo Drive,(P/N 850A), the USB 2.0 Multibay II Cradle,(P/N PA509A) is required	PA509A
Storage Controllers and options	HP U320 Internal SCSI Cable Kit	385749-B21
	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
	HP 8 Internal Port SAS HBA with RAID NOTE: For use with SATA drives only	347786-B21
	HP SATA/SAS 1U Cable Kit NOTE: For use with SATA drives only	398307-B21
	HP PL100 SCSI RAID Controller	355671-B21
	HP PCI Express Riser Board Kit	378841-B21

Options

Communications	HP NC150T PCI 4-port Gigabit Combo Switch Adapter	367132-B21
	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC320T PCI Express Gigabit Server Adapter	367047-B21
	HP NC340T PCI-X Quad Port Gigabit Server Adapter	391661-B21
	HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
	HP NC370F PCI-X Multifunction 1000SX Gigabit Server Adapter	374193-B22
	HP NC370T PCI-X Single Multifunction Gigabit Server Adapter	374191-B22
	HP NC510C PCIe 10 Gigabit Server Adapter	414129-B21
	HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21
	HP NC1020 PCI Single Port Gigabit Server Adapter	353377-B21
	HP NC7170 PCI-X Dual Port Gigabit Server Adapter	313881-B21
	HP NC7771 PCI-X Single Port Gigabit Server Adapter	290563-B21
	NOTE: A minimum of 1 GB of memory is required for NC370x adapters, with a maximum of two NC370x adapters permitted in a server.	
	HP 4x Fabric 1m Copper Cable	376232-B21
	HP 4x Fabric 3m Copper Cable	376232-B22
	HP 4x Fabric 5m Copper Cable	376232-B23
	Myrinet-Fiber/PCI-X Interface (Dual channel Rev. D card)	360040-B21
	Myrinet -Fiber/PCI-X Interface, M3F-PCIXD-2	257894-006
	Myrinet 2XP PCI-X, Fiber F-Series, 2MB NIC	390456-B21
	NOTE: For HPC interconnect adapters please see the HPC Interconnect section of this QuickSpecs.	
Rack Kits	1U Cable Management Arm	365403-B21
	NOTE: Package contains two cable management arms	
Tape Drives	NOTE: A separate SCSI Controller is required for connecting SCSI tape drives to this server.	
	USB Tape Drives	
	HP StorageWorks DAT 24 USB External Tape Drive (Carbonite)	DW070A
	HP StorageWorks DAT 40 USB External Tape Drive (Carbonite)	DW023A
	HP StorageWorks DAT 72 USB External Tape Drive (Carbonite)	DW027A
	DAT External Tape Drive	
	HP StorageWorks DAT 24 SCSI External Tape Drive (Flint)	C1556D
	HP StorageWorks DAT 40 SCSI External Tape Drive (Carbon)	C5687C
	HP StorageWorks DAT 72 SCSI External Tape Drive (Carbon)	Q1523B
	Ultrium External Tape Drive	
	HP StorageWorks Ultrium 232 External Tape Drive, (Carbonite)	DW065A
	Rack-Mount Tape Drive	
	HP StorageWorks 1U Rack-Mount Kit with one DAT 72 drive (Carbon)	A7443A
	1U USB Cable Option Kit	396114-B21
	NOTE: Converts a 1U SCSI rack-mount kit to a USB interface to support the USB tape drives.	

Options

NOTE: When attaching to an external tape drive, autoloader or jukebox, you must also purchase a HBA
NOTE: For a complete listing of HP tape drive offerings supported with the DL140 G2, visit
http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html

StorageWorks Options

NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see:
http://h18006.www1.hp.com/storage/saninfrastructure/hba.html

HP StorageWorks FC2214 2 Gb, 64-bit/133 MHz PCI-X-to-Fibre HBA	281541-B21
HP StorageWorks FC2214DC 2 Gb, Dual Port, 64-Bit/133 MHz PCI-X HBA	321835-B21
HP StorageWorks 2 Gb, Single Channel, 133 MHz PCI-X HBA	A7388A
HP StorageWorks 2 Gb, Dual Channel, 133 MHz PCI-X HBA	A7387A
HP StorageWorks FC1143 4Gb PCI-X 2.0 HBA	AB429A
HP StorageWorks FC1243 Dual Channel 4Gb PCI-X 2.0 HBA	AE369A
HP StorageWorks FC2142SR 4Gb PCI-e HBA	A8002A
HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA	A8003A
HP StorageWorks FC1142SR 4Gb PCI-e HBA	AE311A
HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA	AE312A
HP StorageWorks FC2143 4Gb PCI-X 2.0-to Fibre Channel HBA	AD167A
HP StorageWorks FC2243 Dual Channel 4Gb PCI-X 2.0 C HBA	AD168A

HP Data Protector Express Software

HP DP Express Backup Server Upgrade for ProLiant Software	BB117AP
HP DP Express Package for Microsoft Small Business Server	BB118AA

NOTE: Please see the HP Data Protector Express QuickSpecs for additional information regarding the purchase of HP Data Protector Express software:
http://h18000.www1.hp.com/products/quickspecs/12337_ca/12337_ca.html
NOTE: To obtain a free licensed copy of HP Data Protector Express for ProLiant edition software, please visit the "Protect Your Data" link accessible from your ProLiant server's System Management Homepage (SMH) software (SmartStart 7.5 or later).

USB Options

128MB USB Drive Key	DQ819B
256MB USB Drive Key	DL973B
HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
HP USB 04 Standard Keyboard	DT528A#xxx
USB 2.0 4-port HUB	DG954A
HP 1GB Drive Key II- USB 2.0 Flash Drive	AG382AA
HP 512MB DriveKey II- USB Flash Drive	ED516AA

Options

HP KVM Switch Options	HP 1x4 USB/PS2 KVM Switch, TT	371301-D71
	HP 1x4 USB/PS2 KVM Switch, RM	371302-B21
	HP PS2 KVM Cable with audio, 6', 2-pack	371730-B21
	HP USB KVM Cable with audio, 6', 2-pack	371729-B21
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm	
HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-D89 DCE Female, 1-pack	AF103A
	Serial Adapter, RJ45-D89 DCE Female, 8-pack	AF110A
	NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm	
	2x1x16 IP Console Switch with Virtual Media	AF601A
	4x1x16 IP Console Switch with Virtual Media	AF602A
	2x16 Server Console Switch with Virtual Media	AF600A
	PS/2 Virtual Media Interface Adapter, 1 pack NOTE: Requires PS/2 and one USB port on server.	AF604A
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm	
Service and Support Offerings (HP Care Pack Services)	**Hardware Services 4-Hour On-site Service**	
	13-Hour x 5-Day Coverage, 3 Years, Electronic	U9509E
	24-Hour x 7-Day Coverage, 3 Years, Electronic	U9510E
	Hardware Services Next Business Day On-Site Service	
	9-Hour x 5-Day Coverage, 3 Years, Electronic	U9508E
	Hardware Services 6-Hour Call to Repair On-Site Service	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U9511E
	Hardware Installation, Electronic	U9520E
	NOTE: For additional information on HP Care Pack Services, please see http://www.hp.ca/hps/carepack/.	

Memory

HP ProLiant DL140 G2 (all models)

Standard Memory

1 GB (2 x 512 MB) of PC2-3200 DDR2 SDRAM running at 400MHz, with Advanced ECC capabilities Memory installed.

Maximum Memory

Up to 16GB memory is available with the optional installation of PC2-3200 Registered ECC DDR SDRAM DIMM Memory kits.

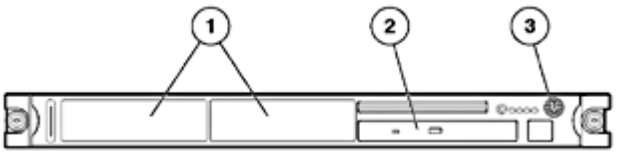
Memory should be installed in pairs and matched for optimum performance.

NOTE: Chart does not represent all possible memory configurations.

Memory	Slot							
	1	2	3	4	5	6	7	8
Standard (1 GB)	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Maximum (16 GB)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

Following are memory options available from HP:

4096 MB of Advanced ECC PC2-3200 DDR SDRAM DIMM Memory Kit (2 x 2048 MB)	343057-B21
2048 MB of Advanced ECC PC2-3200 DDR SDRAM DIMM Memory Kit (2 x 1024 MB)	343056-B21
1024 MB of Advanced ECC PC2-3200 DDR SDRAM DIMM Memory Kit (2 x 512 MB)	343055-B21



1	Two 1" Non-hot plug SATA or SCSI Hard Drive Bays
2	Optional CD- ROM or DVD drive
3	Power On/Off

Drive Support

Removable Media

	Quantity Supported	Position Supported	Controller
IDE (ATAPI) CD-ROM Drive	Up to 1	2	Integrated IDE (ATAPI) (optional)
DVD-ROM	Up to 1	2	Integrated IDE (ATAPI) (optional)

Hard Drives

SATA - Non-Hot Plug

	Quantity Supported	Position Supported	Controller
80GB 7,200 rpm	Up to 2	1	Embedded SATA Controller
160GB 7,200 rpm	Up to 2	1	Embedded SATA Controller
250GB 7,200 rpm	Up to 2	1	Embedded SATA Controller
500GB 7,200 rpm	Up to 2	1	Embedded SATA Controller

NOTE: When purchasing systems with the 500GB NHP SATA drives, please reference the Configuration Information section of this QuickSpecs to order via Configuration to Order.

SCSI- Non-Hot Plug

	Quantity Supported	Position Supported	Controller
36GB 15,000 rpm	Up to 2	1	Ultra320 Single Channel PCI-X card (in low profile slot) on SCSI models
72GB 10,000 rpm	Up to 2	1	Ultra320 Single Channel PCI-X card (in low profile slot) on SCSI models
146GB 10,000 rpm	Up to 2	1	Ultra320 Single Channel PCI-X card (in low profile slot) on SCSI models

Power Specifications

Spare Kit	389322-001
Operational Input Voltage Range (Vrms)	90Vac to 264Vac full range
Frequency Range (Nominal) (Hz)	47 Hz to 63 Hz

Nominal Input Voltage (Vrms)	100	115	200	220	230	240
Max Rated Output Wattage Rating	500	500	500	500	500	500
Nominal Input Current (A rms)	6.84	5.78	3.25	2.91	2.75	2.63
Max Rated Input Wattage Rating (Watts)	684	665	649	641	632	632
Max. Rated VA (Volt-Amp)	820	820	820	820	820	820
Efficiency (%)	73	75	77	78	79	79
Power Factor	1.00	1.00	.99	.98	.98	.98
Leakage Current (mA)	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
Maximum Inrush Current (A peak)	60	60	60	60	60	60
Maximum Inrush Current duration (mS)	1	1	1	1	1	1

System Specifications

	Power	
ProLiant DL140 G2 Fully Configured	110V/60Hz	220V/50Hz
Fully Loaded System Input Wattage (W)	682	660
Fully Loaded System Input Current (A rms)	6.2	3.0
Fully Loaded System Thermal (BTU- Hr)	2327	2252
Fully Loaded System VA (Volt-Amp)	682	660
System Leakage with all power supplies loaded (mA)	<3.5	<3.5
System Inrush Current with all power supplies loaded (A)	60	60
Power cord requirements	Nema 5-15P to IEC320-C13	IEC320-C13 to IEC320-C14
**Power shown is for a fully configured system consisting of (2) CPU, (8) double-sided DIMMs, (2) HDDs, (1) CD-ROM, and (2) PCI cards.		

Power Cord Part Number	307348-B21
Power Cord - 12' (NEMA)	307372-001

System Unit	Dimensions (HxWxD) (with feet)	1.70 x 16.78 x 26.75 in (4.32 x 42.62 x 67.95 cm)	
	Weight (approximate)	35 lb (15.87 kg)	Fully configured
	Input Requirements (per power supply)	Range Input Voltage	90 to 140 VAC/180 to 264 VAC
		Normal Line Voltage	115 or 230 VAC
	Line Frequency	47 to 63 Hz	
	Rated Input Current load	7.1A at 115VAC, 3.6A at 230VAC	
	BTU Rating	BTU-Hr	2371
	Power Supply Output Power (per power supply)	Rated Steady-State Power	500W
		Maximum Peak Power	645W
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Shipping	-40° to 140° F (-40° to 60° C)
	Relative Humidity (non-condensing)	Operating	10% to 85%
		Non-operating	10% to 95%
	Acoustic Noise	Idle (Fixed Disk Drives Spinning)	
		L WAd (BELS)	6.31
		Operating (Random Seeks to Fixed Disks)	
		L WAd (BELS)	6.32

NOTE: All temperature ratings shown are for sea level. An altitude derating of 1° C per 304.8 m (1.8°F per 1,000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Upper operating limit is 3,048m (10,000 ft) or 70 Kpa/10.1 psia. Upper non-operating limit is 9,144 m (30,000 ft) or 30.3KPa/4.4 psia. System performance may be reduced if operating with a fan fault or above 30C.
NOTE: Storage maximum humidity of 90% is based on a maximum temperature of 45° C (113° F). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.

Non-Hot Plug SATA Hard Drives	80 GB 7.2K 383410-B21	Capacity	80027 MB	
		Height	1.028 in (2.61 cm)	
		Width	4.0 in (10.16 cm)	
		Interface	SATA 150	
		Transfer Rate Synchronous (Maximum)	150 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.8 ms
			Average	9.0 ms
			Full-Stroke	17.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	160,086,528
		Operating Temperature	41° to 131° F (5° to 55° C)	

Technical Specifications

Non-Hot Plug SCSI Hard Drives	36.4-GB 15K 357012-B21	Capacity	36419.2 MB	
		Height	1 in (2.54 cm)	
		Width	4 in (10.16 cm)	
		Interface	Ultra320 SCSI	
		Transfer Rate Synchronous (Maximum)	320 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.4 ms
			Average	3.8 ms
			Full-Stroke	8 ms
			Rotational Speed	15,000 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	71,132,000
		Operating Temperature	50° to 95° F (10° to 35° C)	

Integrated Dual Broadcom 10/100/1000 NICs (Wake on LAN and PXE capable)	Network Interface Compatibility	10Base-T/100Base-TX/1000Base-TX	
		IEEE 802.3 10Base-T	
		IEEE 802.3 1000Base-T	
		IEEE 802.3 100Base-TX	
	Data Transfer Method	64-bit, 133MHz PCI(X)1.0	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000Base-TX	Category 5 UTP (2 Pair); up to 328 ft (100 m)

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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.